

more finely sculptured than *gualtierana*, umbilicus wholly closed. It differs from *laurenti* by the more deeply descending last whorl and the much less convex base. Alt. 20, diam. 31 mm. If found to be a different race, it may be called ver. *granadæ* (pl. IV, fig. 4).

Helicodonta (*Caracolina*) *lenticula* Fér. The examples before me are smaller than the Sicilian specimens.

Buliminus quadridens Müll. Several dozen specimens were taken. Dr. Pilsbry, to whom I submitted the form, writes, "The *Buliminus* is *B. quadridens* Müll., rather a long form of the species, but certainly that."

LYMNAEA AURICULARIA NEAR PHILADELPHIA.

BY BAYARD LONG.

The writer's proper field of activity belongs in the realm of botany; but like many another, he sometimes wanders from the beaten path of his own special science. A note, however, upon the occurrence of a foreign species markedly thriving in our own natural habitats, and there associating with indigenous forms in so perfectly a naturalized state that only a knowledge of the normal distribution of the species makes it possible to detect the status of its occurrence: such a note seems rather familiar ground, since there is such a host of introduced plants whose migrations must be kept under observation. So the writer may, in a measure, be justified in breaking into Conchology. Botanists make rather a point of putting upon record the early occurrences of foreign elements entering into our flora, because, besides being of an historical interest, a lack of such data, among plants at least, has often led to considerable confusion and error as to what are actually indigenous plants of any given area. Such a condition is probably not so likely to occur among shells, but still it may be of no less importance to have definite record of observations of species becoming naturalized, in case the forms should possibly become widespread and a knowledge of their original centres of dissemination lost.

In 1910 there was brought to the Philadelphia Academy by Samuel R. Jacob some shells which he had casually collected in Europe, and also some specimens of *Lymnaea auricularia* (Linn.) which, however, were said to have been collected from near

Philadelphia in a pond about one mile south of Ogontz, Montgomery County, Penna., along Old York Road. A possibility of accidental mixture of specimens was thought to exist, and no published record made of it.

Upon Mr. E. G. Vanatta's learning that I lived near the *auricularia* locality, he mentioned the case to me and I felt confident that the station referred to must be that known as Dobbin's pond at Old York Road and Ashbourne Road. He asked me if I would not sometime examine the pond with the hope of verifying the Jacob record. I accordingly did so on May 22nd of this year and found, associated with *Planorbis antrosus* Conrad, an abundance of a large *Lymnæa* which proved to be the desired *L. auricularia*, as was verified the following morning by Dr. Pilsbry and Mr. Vanatta when I brought in living material.

Dobbin's Pond was doubtless at one time well kept, since it is situated on private property, but for many years the estate has been largely left to take care of itself, and consequently much debris of refuse, dead leaves and sticks has collected in it. A delta formation of considerable extent occurs at the inlet stream. Few, if any, large water-plants, like pond-lilies, occur, but there is an abundance of algal growth, and pond-scums cover much of the surface.

The *Lymnæa* is a very striking species, both because of the large size of full-grown individuals, and, of the conspicuous dark mottling of the mantle on a light yellow ground as seen through the shell on the younger individuals. The mottling was commonly obscured in the large specimens because of algal growth and dirt. Most of the animals, especially the half-grown ones, were found crawling around in shallow, quiet water on the muddy bottom, along the sides of the delta. The large individuals were generally found attached to floating logs or sticks, and one was seen sticking to grass stems hanging into the water. The majority of the specimens seen were doubtless half-grown individuals from the past season. The shells were found to measure on the average about 17 mm. \times 12 mm. The largest shells measured about 28 mm. \times 21 mm., but some of Jacob's collection are as large as 30 mm. \times 24 mm. One specimen, found dead, has the aperture very beautifully and widely flaring but in most of the material this is not well-developed, or else has been broken away.

Except for a very possible solution, suggested by Mr. Vanatta,

I am rather at a loss to account for the occurrence of this European species at this station. In both the localities previously reported, that of Mr. H. E. Walter at Lincoln Park, Chicago, reported by Mr. F. C. Baker,¹ and that of Mr. R. E. Call, at Flatbush, Brooklyn, N. Y.,² the introduction of the species seems to be satisfactorily traced to European plants cultivated in either green-houses or ponds. But neither of these conditions certainly prevail at the present time at the new locality, or to furnish a particularly satisfactory solution. Mr. Vanatta suggests that, from the common use of these snails in aquariums, and the pond being on private property once doubtless well taken care of, it is very possible that the contents of an aquarium may have been transferred to the pond at some time or other. I have since made inquiries and am told that the pond has contained gold fish for many years and that they are at present still frequent there. So the evidence seems rather suggestive that this solution may be correct.

Suffice it, however, that the species has certainly become extensively naturalized in this pond and is actually one of its most prominent molluscan elements.

A NEW OREOHELIX FROM COLORADO.

BY H. A. PILSBRY.

We have recently received from the Hon. Junius Henderson a series of shells collected by Mr. Albert Dakan, which seem to represent a new specific form, which may appropriately be named for Mr. Henderson, whose scientific works include an excellent account of the mollusks of Colorado.

OREOHELIX HENDERSONI, n. sp.

The shell is solid, in shape much like *O. strigosa depressa* (Ckll.), the last whorl angular in front of the aperture, becoming rounded in the last half, shortly descending in front. First $2\frac{1}{2}$ whorls rusty brown; the ground color then becomes very pale brown, and a narrow darker band midway between sutures appears, usually not continuing upon the last whorl, which is lighter, more cream-colored,

¹ Nautilus xv, p. 59, 1901.

² Science, New Series, xvi, p. 65, 1902.